

03040202-100

(Sparrow Swamp)

General Description

Watershed 03040202-100 is located in Darlington, Florence, and Lee Counties and consists primarily of **Sparrow Swamp** and its tributaries. The watershed occupies 107,735 acres of the Upper and Lower Coastal Plain regions of South Carolina. The predominant soil types consist of an association of the Rains-Noboco-Norfolk-Bonneau series. The erodibility of the soil (K) averages 0.14; the slope of the terrain averages 2%, with a range of 0-6%. Land use/land cover in the watershed includes: 49.8% agricultural land, 23.4% forested land, 19.4% scrub/shrub land, 6.5% forested wetland, 0.5% urban land, and 0.4% water.

Sparrow Swamp originates near the City of Hartsville, and accepts drainage from Burnt Branch before flowing through Smith Pond and Marco Millpond. Gully Run flows through Bell Pond and joins Sparrow Swamp in Marco Millpond. Long Branch enters the swamp downstream, followed by Harris Branch and Screeches Branch. Boggy Gully Swamp (The Bay, Big Cypress Bay, Little Cypress Bay, Boggy Gully Bay, Bees Wax Bay) also originates near Hartsville, and flows through Harolds Millpond and Andrews Millpond before draining into Sparrow Swamp. Sparrow Swamp then accepts drainage from McCalls Branch, Newman Swamp, Boyds Pond, Long Branch, Deep Hole Swamp (Camel Branch, Bay Branch, Bay Lake, Poplar Branch), and Magnolia Branch. The Lake Swamp Watershed enters the system next followed by Long Branch (Meadow Prong) at the base of the watershed. The Sparrow Swamp Watershed flows into the Lynches River. There are numerous ponds and lakes in this watershed (totaling 218.1 acres), and a total of 225.0 stream miles. Sparrow Swamp and Newman Swamp are classified FW* (Dissolved oxygen not less than 4 mg/l and pH between 5.0 and 8.5) and the remaining streams in the watershed are classified FW.

Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
PD-229	S	FW*	NEWMAN SWAMP AT S-16-449 0.9 MILES NE OF LAMAR
PD-072	S	FW*	SPARROW SWAMP AT S-16-697 2.5 MILES E OF LAMAR
PD-332	P	FW*	SPARROW SWAMP AT S-21-55 NEAR JOHNSONS CROSSROADS

Newman Swamp (PD-229) - Aquatic life uses are not supported due to dissolved oxygen excursions, compounded by a significant decreasing trend in dissolved oxygen concentration and a significant increasing trend in turbidity. There is a significant decreasing trend in pH. This is a blackwater swamp system, characterized by naturally low dissolved oxygen concentrations; however, dissolved oxygen concentrations are inordinately low and the decreasing trend in dissolved oxygen suggests that conditions are deteriorating. It is also a secondary monitoring station with sampling purposely biased towards periods with potentially low dissolved oxygen concentrations. Recreational uses are fully supported.

Sparrow Swamp - There are two monitoring sites along Sparrow Swamp, and aquatic life and recreational uses are fully supported at both sites. The stream frequently does not flow or is dry at the upstream site (**PD-072**). Although dissolved oxygen excursions occurred, they were typical of values seen in stagnant streams and were considered natural, not standards violations. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter.

There is a significant increasing trend in turbidity at the downstream site (**PD-332**). There is also a significant increasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. P,P' DDE (a metabolite of DDT) was detected in the 1994 sediment sample and PCB-1242 was detected in the 1998 sample. Although the use of DDT was banned in 1973, it is very persistent in the environment.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD) COMMENT	NPDES# TYPE LIMITATION
SPARROW SWAMP TOWN OF TIMMONSVILLE WWTP PIPE #: 001 FLOW:1.29 (HCR) WQL FOR TRC,NH3N	SC0025356 MAJOR DOMESTIC WATER QUALITY

Nonpoint Source Management Program

Camp Facilities

FACILITY NAME/TYPE RECEIVING STREAM	PERMIT # STATUS
LOCKHAVEN CAMPERS CT/FAMILY SPARROW SWAMP	21-0279 ACTIVE

Land Disposal Activities

Land Application Sites

LAND APPLICATION SYSTEM FACILITY NAME	ND# TYPE
SPRAYFIELD TOWN OF LAMAR	ND0063495 DOMESTIC

Growth Potential

There is a moderate potential for growth in this watershed, which contains the Towns of Lydia and Lamar, and a portion of the Town of Timmons ville. U.S. Hwy. 76 and a rail line cross the watershed at the Town of Timmons ville connecting the Cities of Sumter and Florence, and U.S. Hwy. 401 crosses the watershed at the Town of Lamar. Water and sewer services are provided for the Towns of Lamar and Timmons ville and the areas immediately surrounding them. Improved water and sewer systems in these

towns holds the potential for future industrial growth in the area. Interstates I-20 and I-95 cross the watershed, and an expansion of the Timmons ville Water and Sewer System along S.C. Hwy. 403 to I-95 will encourage growth. In addition to the S.C. Hwy. 403/I-95 interchange, there is a new interstate interchange at I-95 and county road 21-83. Honda U.S.A. recently built a plant at this interchange, and is now undergoing a major expansion that should spur future growth in the area. The remainder of the watershed is rural with agricultural and timberland uses.